

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

ETUDES & PRODUCTIONS SCHLUMBERGER
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NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY

(PCT Rule 71.1)

Date of mailing
(day/month/year)

26.01.2006

Applicant's or agent's file reference
WO21.1197

IMPORTANT NOTIFICATION

International application No.
PCT/EP2005/000227

International filing date (day/month/year)
10.01.2005

Priority date (day/month/year)
27.01.2004

Applicant
SCHLUMBERGER PETROLIERS SCHLUMBERGER

Phax Nationale 27 Sulyok

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/001).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:



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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference WO21.1197		FOR FURTHER ACTION		See Form PCT/PEA418
International application No. PCT/EP2005/000227		International filing date (day/month/year) 10.01.2005		Priority date (day/month/year) 27.01.2004
International Patent Classification (IPC) or national classification and IPC B01D17D02, B01D17D04				
Applicant SCHLUMBERGER PETROLIERS SCHLUMBERGER				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 6 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in Item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 25.08.2005		Date of completion of this report 26.01.2006		
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patenlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3018		Authorized Officer Plaka, T Telephone No. +31 70 340-2225		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2005/000227

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-16 as originally filed

Claims, Numbers

1-9 received on 25.08.2005 with letter of 23.08.2005

Drawings, Sheets

1/5-5/5 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing *(specify)*:
- ☐ any table(s) related to sequence listing *(specify)*:

4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☒ the claims, Nos. 1,3,4-6,9
- ☐ the drawings, sheets/figs
- ☐ the sequence listing *(specify)*:
- ☐ any table(s) related to sequence listing *(specify)*:

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 3

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 3 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See separate sheet for further details

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1,2,7,8
	No: Claims	
Inventive step (IS)	Yes: Claims	1,2,7,8
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item I

Basis of the report

Claims 1,3,4,9

The term **separating** means introduced in said amended claims has no direct basis in the description as filed and as such, it goes beyond the disclosure of the application as filed. Furthermore, the guiding means in claim 9 refer to the possibility of an one plate separator, which has not been disclosed in the application as filed.

Claims 5, 6

Said claims (dependent on claim 1) refer to a separating system having a) guiding means and b) a weir located at an upstream side of the associated coalescing element. However, no embodiment with the combination of features a) and b) has been disclosed in the application as originally filed. Said claims are therefore disregarded in the present report.

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Claim 3

When using the description (page 12, para 0065 - para 13, para 0066) and the corresponding figures 4A to 4C to interpret said claim, it is not clear at all whether the formation of a water bubble is advantageous for the oil/water separation.

If it is so wished, then what is the function of the coalescing element in terms of oil droplet formation as the oil droplets are formed because of the bursting of the water bubble.

Furthermore, the oil recovery pipe 49 in said figures appears to be upstream with respect to the guiding means, while in the embodiment of claim 1 to which claim 3 refers, the oil recovery pipe appears to be located downstream. The subject-matter of said claim is therefore unclear contrary to the requirements of Art. 6 PCT.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

Reference is made to the following documents:

- D1: US-A-3 914 175 (KUNZ OTTO ET AL) 21 October 1975 (1975-10-21)
- D2: DE 31 51 749 A (TS PK TEKH B V RYBOPROM AZOVO ;
SEVASTOPOLSKOE PROIZV OB RYBNO (SU)) 14 July 1983 (1983-07-14)
- D6: EP-A-0 566 035 (DYCKERHOFF & WIDMANN AG) 20 October 1993 (1993-10-20)
- D10: WO-A-0220115 (EARTH (CANADA) CORP.) 14 March 2002 (2002-03-14)
(cited in the application)

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 and 7 does not involve an inventive step in the sense of Article 33(3) PCT.

Documents D1 or D2, which are equally regarded as being the closest prior art to the subject-matter of claim 1, disclose respectively (cited parts as in the search report) a system for separating an emulsion fluid into a recovered fluid and a purified fluid, the emulsion fluid comprising a continuous phase and a dispersed phase, wherein the system comprises a vessel at an inlet of which the emulsion fluid may flow, a coalescing element, allowing to coalesce at least a portion of the dispersed phase into large drops and separating and guiding means, associated with the coalescing element, guiding the detached drops from the associated coalescing element for further recovery. The guiding means are so structured as to allow the continuous phase to flow through.

The subject-matter of claim 1 (and corresponding method claim 7) therefore differs from this known system (method) of D1 or D2 in that the coalescing element is made of Reusable Polymer Absorbent material.

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(SEPARATE SHEET)**

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Reusable Polymer Absorbent Materials are described in documents D6 and D10 to be used as oil coalescing materials providing the same advantages as in the present application. The skilled person would therefore regard it as a normal option to include this feature in the system described in document D1 in order to have a coalescing element which is regenerable and of high efficiency. Therefore the subject-matter of claims 1 and 7 does not involve an inventive step.

Furthermore, the additional features of dependent claims 2 and 5 are known from D2. Regarding inventive step, the same reasoning applies to these claims.